CERTIFICATE OF ACCREDITATION

This is to attest that

HAAG RESEARCH & TESTING, LLC

1410 LAKESIDE PARKWAY, SUITE 100
FLOWER MOUND, TEXAS 75028, U.S.A.

Testing Laboratory TL-656

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories.* This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date September 11, 2023

IAS ACCREDITED

President

Visit www.iasonline.org for current accreditation information.

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

HAAG RESEARCH & TESTING, LLC

www.haagresearchtesting.com

Contact Name Steven R. Smith **Contact Phone** +1-214-614-6500

Accredited to ISO/IEC 17025:2017 *Effective Date September 11, 2023*

Physical	
ANSI FM 4473	Impact resistance testing rigid roofing materials by impacting with freezer ice balls
ANSI/FM 4478	American National Standard for Roof Mounted Rigid Photovoltaic Modules (Appendix E – Determining the Susceptibility to Hail Damage of Rigid Photovoltaic Modules only)
ASTM D228	Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing, Tear Strength Only
ASTM D3161/D3161M	Standard test method for wind-resistance of steep slope roofing products (fan-induced method)
ASTM D4977	Standard Test Method for Granule Adhesion to Mineral-Surfaced Roofing by Abrasion
ASTM D7281	Standard test method for determining water migration resistance through roof membranes
HAAG Internal Procedure	HRT roofing sample desaturation
IEC 61215-2	Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 2: Test Procedures (MQT 17 – Hail Test only, excluding clause 4.17.5b)
UL 2218	Standard for impact resistance of prepared roof covering materials
Structural	
ASTM C518	Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

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